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Typical laboratory characteristics of DKA and HHS*

	DKA			HHS
	Mild	Moderate	Severe	
Plasma glucose (mg/dL)	>250	>250	>250	>600
Plasma glucose (mmol/L)	>13.9	>13.9	>13.9	>33.3
Arterial pH	7.25 to 7.30	7.00 to 7.24	<7.00	>7.30
Serum bicarbonate (mEq/L)	15 to 18	10 to <15	<10	>18
Urine ketones[¶]	Positive	Positive	Positive	Small
Serum ketones - Nitroprusside reaction	Positive	Positive	Positive	≤ Small
Serum ketones - Enzymatic assay of beta hydroxybutyrate (normal range <0.6 mmol/L)^Δ	3 to 4 mmol/L	4 to 8 mmol/L	>8 mmol/L	<0.6 mmol/L
Effective serum osmolality (mOsm/kg)[◇]	Variable	Variable	Variable	>320
Anion gap[§]	>10	>12	>12	Variable
Alteration in sensoria or mental obtundation	Alert	Alert/drowsy	Stupor/coma	Stupor/coma

DKA: diabetic ketoacidosis; HHS: hyperosmolar hyperglycemic state.

* There may be considerable diagnostic overlap between DKA and HHS.

¶ Nitroprusside reaction method.

Δ NOTE: Many assays for beta hydroxybutyrate can only report markedly elevated values as >6.0 mmol/L.

◇ Calculation: $2[\text{measured Na (mEq/L)}] + \text{glucose (mg/dL)}/18$.§ Calculation: $(\text{Na}^+) - (\text{Cl}^- + \text{HCO}_3^-)$ (mEq/L). See text for details.

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